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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/015,815 | 11/02/2001 | Bedri Erdem | 60825A | 3507 |
| 23408 | 7590 | 03/22/2004 | EXAMINER | |
| GARY C COHN, PLLC 4010 LAKE WASHINGTON BLVD., NE #105 KIRKLAND, WA 98033 | | | SERGENT, RABON A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1711 | |

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,815

Applicant(s)

ERDEM ET AL.

eb

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/02, 11/02, 8/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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1. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, within claim 1, it is unclear from the language of the claim if the mixture or the monomer is to be liquid or solid at room temperature.

Secondly, within claim 13, it is unclear with respect to what level of polyurethane may be present and still satisfy the "substantially devoid" language. It cannot be clearly determined to what extent "substantially" is to modify "devoid".

Lastly, within the last two lines of claim 19, the use of "rich" renders the claims indefinite, because the language is subjective. It is unclear with respect to what quantitative values are encompassed by "rich".

2. Claims 1-18 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is unclear which conditions are encompassed by the language, "sufficient to form an aqueous dispersion" and "sufficient to polymerize the monomer(s) and chain-extend said prepolymer in a single step".

Furthermore, within claim 6, applicants have claimed that the prepolymer is water dispersible, and within claim 7 (dependent from claim 6), applicants have stated that the prepolymer may be produced from a polymer of propylene oxide. However, applicants have failed to provide enablement for producing water dispersible prepolymers derived from

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propylene oxide. Within the art (see page 5 of EP 849295), it is known that polyurethanes derived from polyoxypropylene polyols are hydrophobic and one would not expect such prepolymers to be water dispersible.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 11, 13, 16, 17, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 4315269.

The reference discloses the production of hybrid particle dispersions, wherein a polyurethane prepolymer is dispersed with an ethylenically unsaturated monomer. Once dispersed through the use of an emulsifier, the prepolymer is chain extended and the monomer is polymerized to yield interpenetrating polymer particles having the claimed particle sizes. The reference further discloses that the prepolymer may be derived from polyoxyethylene polyols, and the position is taken that such prepolymers are water dispersible. In addition to the emulsifier, the reference discloses the use of hydrophobic alcohols, and the position is taken that this component meets applicants' claimed costabilizer. See pages 2, 3, 5, 6, 7 (lines 32+), and 8 (lines 4-8 and 30+).

5. Claims 1-10, 12, 13, 16, 17, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 849295.

The reference discloses the production of hybrid particle dispersions, wherein a polyurethane prepolymer is dispersed with an ethylenically unsaturated monomer. Once

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dispersed through the use of an emulsifier, including blends of emulsifiers, the prepolymer is chain extended and the monomer is polymerized to yield polymer particles having the claimed particle sizes. See pages 3-6, especially page 4, lines 55+.

6. With respect to claims 6, 7, and 19-20, it is noted that the reference discloses at page 2, lines 19-28 that it was known to produce interpenetrated polymer particles from hydrophilic polyurethane prepolymers, derived from nonionic polyethylene glycol, and ethylenically unsaturated monomers. The position is taken that the use of the hydrophilic prepolymer inherently produces particles having the claimed core/shell morphology.

Any inquiry concerning this communication should be directed to Rabon Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
March 15, 2004